



ACROLON® ZP-1 VHS

VERY HIGH SOLIDS POLYURETHANE INTERMEDIATE COAT

Revised 07/2023 Issue 1

PRODUCT DESCRIPTION

A aliphatic polyurethane, weather resistant 2-pack intermediate coat.

Low solvent content according to Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).

- Very low solvent content
- Unlimited recoat with polyurethane topcoats
- Fast curing even at low temperatures
- Very good weather resistance
- High system compatibility with polyurethane topcoats

RECOMMENDED USE

Can be used as an intermediate coat, when extended recoating times with polyurethane topcoats are expected.

Primarily for steel civil engineering, bridges, pipelines, industrial and harbour installations, sewage plants in contaminated atmospheres.

Particularly suited for in shop application as transportable coating.

PRODUCT TECHNICAL DATA

Volume Solids:	74 ± 2% (ISO 3233-3)
Weight Solids:	85 ± 2%
VOC:	225 g/l determined practically in accordance with Protective Coatings Directive of German Paint Industry Association (VdL-RL 04). 225 g/l calculated from formulation to satisfy EC Solvent Emissions Directive. 150 g/kg calculated from formulation to satisfy EC Solvent Emissions Directive (UK).
Colours:	RAL 6019 and white. Other colours upon request.
Flash Point:	Base: 37°C, Hardener: 38°C.
Cleaner/Thinner:	Thinner EG (for cleaning). Thinner EG for thinning with max. 3% to adapt the viscosity. Thinning will affect VOC compliance, sag tolerance and dry film thicknesses.
Pack Size:	A two component material supplied in separate containers to be mixed prior to use: 30 kg (20 litre) unit when mixed. Volume will vary with colours and density.
Mixing Ratio:	88 parts base to 12 parts hardener by weight. 4.8 parts base to 1 part hardener by volume.
Density:	1.5 kg/l (may vary with colours).
Shelf Life:	2 years from date of manufacture, stored in originally sealed containers in a cool and dry environment.

Recommended Application Methods:

Airless Spray, Brush and Roller

Typical Thickness:

	Recommended Spreading Rate Per Coat	
	Typical	Maximum Sag
Dry	120 µm	360 µm
Wet	162 µm	486 µm
Theoretical Consumption*	0.243 kg/m ² 0.162 l/m ²	
Theoretical Coverage*	4.11 m ² /kg 6.17 m ² /l	

* This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment.

Film thickness will vary depending on actual use and specification.

Pot Life:

+ 20°C | 2 hours

Pot life is dependent on temperature and volume.

By adding 1% w/w Acrolon® PUR Accelerator the pot life of the mixed material is approximately halved.



ACROLON® ZP-1 VHS

VERY HIGH SOLIDS POLYURETHANE INTERMEDIATE COAT

Revised 07/2023 Issue 1

AVERAGE DRYING TIMES

For 120 µm Dry Film Thickness:

	0°C	+ 5°C	+ 20°C	+ 30°C
Dry to handle (Drying Stage 6*)	20 hours	12 hours	5 hours	2 hours
To Recoat	20 hours	12 hours	5 hours	2 hours

For 120 µm Dry Film Thickness

+ adding 1% w/w Acrolon® PUR Accelerator:

	0°C	+ 5°C
Dry to handle (Drying Stage 6*)	9 hours	6.5 hours
To Recoat	9 hours	6.5 hours

*ISO 9117

Maximum recoat time is unlimited. Prior to further applications possible contamination must be removed.

Final cure: 1 week, depending on film thickness and temperature.

These figures are given as a guide only. Factors such as air movement, film thickness and humidity must also be considered.

APPROVALS & ENDORSEMENTS

- Approved according to German standard 'TL KOR-Stahlbauten, Blatt 100'.
- A certificate of conformity is available.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from all surface contamination such as oil, grease, dirt and corrosion products to achieve satisfactory adhesion.

For contaminated and weathered surfaces e.g. primed areas we recommend to clean with Cleaner Wash.

Steel surfaces shall be blast-cleaned to Sa 2 ½ according to ISO 8501-1 (ISO 12944-4).

Hot-dip galvanized surfaces, stainless steel and aluminium shall be prepared by sweep blasting according to ISO 12944-4 with a non-ferrous blasting abrasive.

MIXING

Stir component A very thoroughly using a mechanical paint mixer (start slowly, then increase up to approx. 300 rpm). Add component B carefully and mix both components very thoroughly (including sides and bottom of the container). Mix for at least 3 minutes until a homogeneous mixture is achieved. We recommend to fill the mixed material into a clean container and mix again shortly as described above to avoid incorrect mixing. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothing.

APPLICATION CONDITIONS

Substrate temperature shall be above + 5°C (0°C by adding Acrolon® PUR Accelerator) and at least 3°C above the dew point. The surface must be dry and free from ice.

Material temperature shall be above + 5°C.

Relative air humidity shall be below 85%.

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for satisfactory application characteristics. Always purge spray equipment before use with listed cleaner. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Airless Spray

Unit: Efficient airless equipment

Tip Size: 0.38 – 0.53 mm (0.015 – 0.021 inch)

Fan Angle: 40° - 80°

Operating Pressure: min. 180 bar (2600 psi)

The airless spray details given above are intended as a guide only.

Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent satisfactory atomisation.

As conditions will vary from job to job, it is the applicators responsibility to ensure that the equipment in use has been set up to give the best results.

If in doubt consult Sherwin-Williams customer service.

Brush and Roller

The coating is suitable for brush and roller application. Application of more than one coat may be necessary to give equivalent dry film thickness to a single spray applied coat.



ACROLON® ZP-1 VHS

VERY HIGH SOLIDS POLYURETHANE INTERMEDIATE COAT

Revised 07/2023 Issue 1

RECOMMENDED SYSTEMS

Intermediate coat

Compatible with Zinc Clad® and Macropoxy® epoxy primers.

Versatile to overcoat with a wide range of Acrolon® two pack topcoats provided the surface to be coated is clean, dry and free from contamination.

Example Blatt 100

- 1 x Zinc Clad® R
- 1 x Macropoxy® EG-1 Plus
- 1 x Acrolon® ZP-1 VHS
- 1 x Acrolon® 2230 VHS

Hot-dip galvanized steel, aluminium and stainless steel

- 1x Macropoxy® EG-1 Plus
- 1x Acrolon® ZP-1 VHS
- 1 x Acrolon® topcoat

ADDITIONAL NOTES

Drying times, curing times and pot life should be considered as a guide only.

Mechanical resistance:

Highly resistant to transport and assembly stresses.

Chemical resistance:

Resistant to water, seawater, acid and alkali vapours, salts, detergents, greases, oils and short-term exposure to fuels and solvents.

Temperature resistance:

Dry heat up to + 120°C, short term up to + 150°C.
In case of higher temperatures consult Sherwin-Williams customer service.

Numerical values quoted for physical data may vary slightly from batch to batch.

HEALTH & SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

WARRANTY

Whilst all statements made about our products (whether in this data sheet or otherwise) are correct and accurate to the best of our knowledge, we have no control over the quality or the condition of the substrate, the application conditions or the many other factors affecting your use and application of our product.

The appropriateness of the product under the actual conditions of application or intended use must be determined exclusively by you. The content of this document, and of any oral or written statements already made or to be made in relation to the subject matter of this document, including any suggestions as to appropriate products and any proposed application methods, technical details and other product information represent only test results or experience obtained under controlled or defined circumstances, and is therefore provided for general information purposes only.

Unless we agree specifically in writing to do so, we will not be liable to you for any loss or damage whether in contract, tort (including negligence), breach of statutory duty, misrepresentation, misstatement or otherwise, arising under or in connection with this document or such statements.

We disclaim any express or implied representations, warranties or guarantees (including any implied warranty of merchantability or fitness for a particular purpose), though nothing in this disclaimer excludes or limits our liability for death or personal injury arising from our negligence, or our fraud or fraudulent misrepresentation, or any other liability that cannot be excluded or limited by law.

All products supplied and technical advice given are subject to our Standard Terms and Conditions of Sale which you should request a copy of and review carefully.

This document may be modified and updated from time to time, and is uncontrolled once printed. It is the users responsibility to ensure they are using the most up to date version – this can be found at: www.sherwin-williams.com/protectiveEMEA.

If this datasheet has been translated, then it has been done using the English version as the source. In case of any queries, please refer to the master English version which can be found at: www.sherwin-williams.com/protectiveEMEA.